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L3: Entry 1 of 1 File: DWPI Feb 24, 1998

DERWENT-ACC-NO: 1993-214024
DERWENT-WEEK: 199818

TITLE: Omega-hydro-per:fluoro-alkanoic acids prodn. - by catalytic oxidn. of alpha, alpha, omega-tri:hydro-per:fluoro-alkanol(s), useful for ozone-safe fire extinguishing agents

INVENTOR: BACHMUTOV, J L; DENISENKOV, V F ; MARTYNOVA, N P ; SACHAROV, A M ; SKIBIDA, I P ; BAKHMUTOV, J L ; SAKHAROV, A M

PATENT-ASSIGNEE:

ASSIGNEE	CODE
BACHMUTOV J L	BACHI
DENISENKOV V F	DENII
MARTYNOVA N PF	MARTI
SACHAROV A MPF	SACHI
SKIBIDA I PMPF	SKIBI
BAKHMUTOV J LF	BAKHI
SAKHAROV A MLF	SAKHI

PRIORITY-DATA: 1991WO-SU00266 (December 19, 1991)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 10502049 W	February 24, 1998		022	C07C019/08
WO 9312059 A1	June 24, 1993	R	023	C07C019/08
EP 635468 A1	January 25, 1995	E	012	C07C019/08
EP 635468 A4	April 12, 1995		000	C07C019/08
US 5495034 A	February 27, 1996		008	C07C051/16
EP 635468 B1	September 4, 1996	E	012	C07C019/08
DE 69121919 E	October 10, 1996		000	C07C019/08

DESIGNATED-STATES: JP US AT BE CH DE DK ES FR GB GR IT LU MC NL SE BE CH DE ES FR GB IT LI NL SE BE CH DE ES FR GB IT LI NL SE

CITED-DOCUMENTS:US 3799995; US 4348509 ; US 4546203 ; US 4879068 ; US 4976893 ; US 2115892 ; US 3525758

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP10502049W	December 19, 1991	1991WO-SU00266	
JP10502049W	December 19, 1991	1992JP-0503653	
JP10502049W		WO 9312059	Based on
WO 9312059A1	December 19, 1991	1991WO-SU00266	
EP 635468A1	December 19, 1991	1991WO-SU00266	
EP 635468A1	December 19, 1991	1992EP-0903372	
EP 635468A1		WO 9312059	Based on
EP 635468A4		1992EP-0903372	
US 5495034A	December 19, 1991	1991WO-SU00266	
US 5495034A	July 15, 1994	1994US-0244881	
US 5495034A		WO 9312059	Based on
EP 635468B1	December 19, 1991	1991WO-SU00266	
EP 635468B1	December 19, 1991	1992EP-0903372	
EP 635468B1		WO 9312059	Based on
DE69121919E	December 19, 1991	1991DE-0621919	
DE69121919E	December 19, 1991	1991WO-SU00266	
DE69121919E	December 19, 1991	1992EP-0903372	
DE69121919E		EP 635468	Based on
DE69121919E		WO 9312059	Based on

INT-CL (IPC): C07 B 61/00; C07 C 17/158; C07 C 17/33; C07 C 17/361; C07 C 19/08; C07 C 51/16; C07 C 51/235; C07 C 53/21

ABSTRACTED-PUB-NO: EP 635468B
BASIC-ABSTRACT:

Prodn. of omega-hydro-perfluoroalkanoic acids of formula H(CF2CF2)nCOOH (I) or alpha,omega-dihdyro- perfluoroalkanes of formula H(CF2CF2)nH (II), where n =, 1-10, is effected by oxidising alpha, alpha, omega-trihyd ro- perfluoroalkanols of formula H(CF2CF2)nCH2OH (III) with gaseous O2 or an O2-contg. gas in the presence of a Cu catalyst, a base and an organic solvent.

Pref. prodn. of (I) is effected at 30-60 deg.C and an O2 partial pressure of 0.5-1.5 MPa in the presence of Cu o-phenanthroline or bipyridine complex, base selected from NaOH, KOH and t-BuOK, and lower aliphatic alcohol solvent. Prodn. of (II) is effected at 10-40 deg.C and an O2 partial pressure of 0.1-0.3 MPa in the presence of a Cu salt of an organic acid, KOH, and DMF or sulpholane.

USE/ADVANTAGE - (I) and (II) are esp. useful as 'ozone-safe' fire-extinguishing agents, as well as solvents, extractants and intermediates. The process is simpler than prior art processes and gives high yields (up to 94%) of high-purity prods. (Cf. SU314748, US3423417. US3514322 and US2559629)
ABSTRACTED-PUB-NO:

US 5495034A
EQUIVALENT-ABSTRACTS:

A method for preparing alpha-substituted psi-hydroperfluoroalkanes of the general formula H(CF2CF2)nR wherein R is H or COOH, and n is an integer of 1 to 10 by oxidizing alpha,alpha,psi-trihydroperfluoroalc ohols in an organic solvent with subsequent isolation of the desired product, characterized in that the oxidation of said alpha,alpha,psi-trihy droperfluoroalcohols is carried out by using an oxygen gas or oxygen-conta ining gas in the presence of a homogeneous copper catalyst and an alkaline agent.

Preparing an alpha-substituted omega-dihydroperfluoroalkanes of the general formula H(CF2CF2)nR where R is H or COOH, and n is an integer of 1 to 10 by oxidising alpha, alpha, omega-trihydroperfluoroalcoh ols in an organic solvent with subsequent

isolation of the desired product, characterized in that the oxidn. of the alpha, alpha, omega-trihy droperfluoroalcohols is carried out by using an oxygen gas or oxygen-conta ining gas in the presence of a homogeneous copper catalyst and an alkaline agent.

WO 9312059A

CHOSEN-DRAWING: Dwg.0/0 Dwg.0/0 Dwg.0/0

TITLE-TERMS: OMEGA HYDRO PER FLUORO ALKANOIC ACID PRODUCE CATALYST OXIDATION ALPHA ALPHA OMEGA TRI HYDRO PER FLUORO ALKANOL USEFUL OZONE SAFE FIRE EXTINGUISH AGENT

DERWENT-CLASS: E16 K01

CPI-CODES: E10-C04F; E10-H02B; K01-A; N02-D;

CHEMICAL-CODES:

Chemical Indexing M3 *01*
Fragmentation Code
H6 H601 H609 H684 H689 J011 J171 M280 M312 M314
M315 M316 M321 M332 M344 M349 M362 M363 M391 M416
M620 M720 M903 M904 N209 N212 N224 N321 N341 N441
N513 Q441 Q615 Q621
Markush Compounds
199326-F8201-P

Chemical Indexing M3 *02*
Fragmentation Code
A429 C810 M411 M730 M903 Q421

SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C1993-094919

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L4: Entry 1 of 1 File: DWPI Dec 30, 1986

DERWENT-ACC-NO: 1986-340458
DERWENT-WEEK: 198652

TITLE: Prepn. of carboxylic acid by platinum catalysed oxidn. - of difficulty sol. alcohol, in water, with glycol ether as solubiliser

INVENTOR: LEUPOLD, E I

PATENT-ASSIGNEE:

ASSIGNEE	CODE
HOECHST AG	FARH

PRIORITY-DATA: 1985DE-3522032 (June 20, 1985)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 206054 A	December 30, 1986	G	011	
CA 1268187 A	April 24, 1990		000	
DE 3522032 A	January 2, 1987		000	
DE 3666420 G	November 23, 1989		000	
EP 206054 B	October 18, 1989	G	000	
HU 44476 T	March 28, 1988		000	
JP 61293948 A	December 24, 1986		000	
JP 95002673 B2	January 18, 1995		004	C07C053/126
US 4976893 A	December 11, 1990		000	

DESIGNATED-STATES: BE CH DE FR GB IT LI NL BE CH DE FR GB IT LI NL

CITED-DOCUMENTS:A3...8733; DE 3135946 ; GB 2010248 ; No-SR.Pub ; US 3407220 ; US 4238625

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
EP 206054A	June 6, 1986	1986EP-0107732	
DE 3522032A	June 20, 1985	1985DE-3522032	
JP61293948A	June 19, 1986	1986JP-0141531	
JP95002673B2	June 19, 1986	1986JP-0141531	
JP95002673B2		JP61293948	Based on
US 4976893A	June 18, 1986	1986US-0875638	

INT-CL (IPC): B01J 23/42; C07B 61/00; C07C 51/23; C07C 51/235; C07C 53/00; C07C 53/126; C07C 59/125; C07C 59/70; C07C 61/13; C07C 61/135

ABSTRACTED-PUB-NO: EP 206054A
BASIC-ABSTRACT:

Carboxylic acids are prepd. by Pt-catalysed oxidn. of prim. alcohols with limited

water-solubility with O2, in a mixt. of water and, as solubiliser, an ether of formula R1O(CH2CH2O)mR2, R1, R2 is 1-4C alkyl; m is 1-4.

ADVANTAGE - Difficultly sol. prim. alcohols are oxidised easily and economically. Use of alkali hydroxide is unnecessary and expensive disposal of inorganic salts is avoided. The vapour space contains mainly O2 and water, with no formation of explosive mixts.
ABSTRACTED-PUB-NO:

EP 206054B
EQUIVALENT-ABSTRACTS:

Carboxylic acids are prepd. by Pt-catalysed oxidn. of prim. alcohols with limited water-solubility with O2, in a mixt. of water and, as solubiliser, an ether of formula R1O(CH2CH2O)mR2, R1, R2 is 1-4C alkyl; m is 1-4.

ADVANTAGE - Difficultly sol. prim. alcohols are oxidised easily and economically. Use of alkali hydroxide is unnecessary and expensive disposal of inorganic salts is avoided. The vapour space contains mainly O2 and water, with no formation of explosive mixts.

US 4976893A

Prepn. of carboxylic acids by Pt-catalysed oxidn. of prim. alcohols of limited water solubility with oxygen in a mixt. of water and a solubiliser comprises using as the solubiliser ethers (I) R,O(CH2CH2O)nR 2, where n = 1-4 and R1 and R2 = 1-4C alkyl. (I) is pref. diethylene glycol dimethyl ether esp. triethyleneglycoldimethyl ether. The water/solubiliser ratio is pref. between 0.1 and 100.

ADVANTAGE - Sparingly water-soluble prim. alcohols can now be oxidised in a simple and economical manner. The rate of reaction increases markedly with the oxygen partial pressure. (4pp)

CHOSEN-DRAWING: Dwg.0/0 Dwg.0/0

TITLE -TERMS: PREPARATION CARBOXYLIC ACID PLATINUM CATALYST OXIDATION DIFFICULT SOL ALCOHOL WATER GLYCOL ETHER SOLUBLE

DERWENT-CLASS: E17

CPI-CODES: E10-C04J; E10-C04K; E10-H01D; N02-F01;

CHEMICAL-CODES:

Chemical Indexing M3 *01*
Fragmentation Code
G010 G011 G012 G013 G020 G021 G030 G031 G040 G050
G100 G553 G563 G710 H541 H561 H581 H582 H583 H584
H589 J0 J011 J1 J131 J151 J171 M210 M211 M212
M213 M214 M215 M216 M220 M221 M222 M223 M224 M225
M226 M231 M232 M233 M240 M262 M272 M280 M281 M311
M312 M320 M321 M322 M323 M332 M342 M349 M381 M391
M414 M415 M416 M510 M520 M530 M531 M540 M541 M620
M720 M903 N209 N224 N262 N341 N411 N441 N513
Ring Index
02267

Chemical Indexing M3 *02*
Fragmentation Code
A678 C810 M411 M730 M903 Q421

Chemical Indexing M3 *03*
Fragmentation Code
H5 H582 H583 H584 H8 M210 M211 M212 M213 M214

M231 M232 M233 M272 M282 M312 M321 M322 M323 M332
M342 M383 M391 M392 M393 M416 M620 M730 M781 M903
R023

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0765S; 0943S ; 0945S ; 1061P ; 1779S

SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C1986-147542

PATENT ABSTRACTS OF JAPAN

(11)Publication number : **06-256254**
(43)Date of publication of application : **13.09.1994**

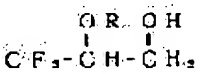
(51)Int.CI. C07C 59/135
B01J 23/72
C07C 51/235
// C07B 61/00

(21)Application number : **05-061477**
(22)Date of filing : **26.02.1993**

(71)Applicant : **JAPAN ENERGY CORP**
(72)Inventor : **KATAGIRI TOSHIMASA**
FURUHASHI KEIZO

(54) PRODUCTION OF 2-ALKYLOXY-3,3,3-TRIFLUOROPROPIONIC ACID

(57)Abstract:
PURPOSE: To readily and inexpensively obtain a compound by oxidizing a 2-alkyloxy-3,3,3-trifluoro-1-propanol with nitric acid containing copper.
CONSTITUTION: A compound of the formula (R is methyl which may have a substituent), especially an optically active compound having an asymmetric center on the methine carbon bound to the trifluoromethyl group and the alkyloxy group is reacted with an oxidizing agent comprising nitric acid containing a catalytic amount, especially 1-10mol.%, of copper at 0°C to the boiling temperature of a solvent to produce the compound. The compound is useful as a raw material for physiologically active substances such as medicines and agricultural chemicals and for functional organic compounds such as liquid crystals and surfactants, or as an optical resolving agent. Difficultly available 2-methoxy-3,3,3-trifluoropropionic acid, especially its optically active isomer, is readily available. Fluorine-containing organic compounds using the compound as a raw material and having difficultly been synthesized can therefore be produced and organic compounds can optically be resolved with the reagent.



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[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

PATENT ABSTRACTS OF JAPAN

(11)Publication number : **06-256254**
(43)Date of publication of application : **13.09.1994**

(51)Int.CI. C07C 59/135
B01J 23/72
C07C 51/235
// C07B 61/00

(21)Application number : **05-061477**
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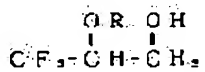

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